


08/21/01

08-23-01

A

Please type a plus sign (+) inside this box → 

PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53 (b))

Attorney Docket No.	70647
First Inventor	Crawford, James A.
Title	OFDM PILOT TONE TRACKING TO REDUCE PERFORMANCE LOSS DUE TO FREQUENCY PULLING AND PUSHING
Express Mail Label No.	EL591660273US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

**ADDRESS TO:**Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages **56**]  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **14**]
5. ☐ Oath or Declaration [Total Pages **3**]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Request and Certification under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☒ Other: ..Cover Sheet For Application (1 page)

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

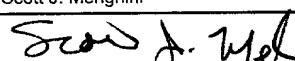
☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No : /

Prior application information: Examiner

Group Art Unit: \_\_\_\_\_

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

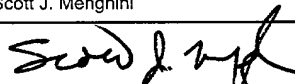
**19. CORRESPONDENCE ADDRESS**☒ Customer Number or Bar Code Labelor ☐ Correspondence address below

Name	FITCH, EVEN TABIN & FLANNERY				
Address	120 S. La Salle Street, Suite 1600				
City	Chicago	State	IL	Zip Code	60603
Country	USA	Telephone	858-552-1311	Fax	858-552-0095
Name (Print/Type)	Scott J. Menghini		Registration No. (Attorney/Agent)		42,880
Signature			Date	August 21, 2001	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

<h1 style="margin: 0;">FEE TRANSMITTAL</h1> <h2 style="margin: 0;">for FY 2001</h2> <p style="margin: 5px 0;">Patent fees are subject to annual revision.</p>		<b>Complete if Known</b>	
		Application Number	
		Filing Date	August 21, 2001
		First Named Inventor	Crawford, James A.
		Examiner Name	TBD
		Group Art Unit	TBD
TOTAL AMOUNT OF PAYMENT		(\$)	395.00
		Attorney Docket No.	70647

METHOD OF PAYMENT	FEE CALCULATION (continued)																																																																																																																																																																																										
<p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayment to:</p> <p>Deposit Account Number: 06-1135</p> <p>Deposit Account Name: FITCH, EVEN TABIN &amp; FLANNERY</p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</p> <p>2. <input type="checkbox"/> Payment Enclosed:</p> <p><input type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other</p>	<p>3. ADDITIONAL FEES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Fee Code</th> <th>Large Entity Fee (\$)</th> <th>Small Entity Fee Code</th> <th>Small Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for <i>ex parte</i> reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>390</td><td>216</td><td>195</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>890</td><td>217</td><td>445</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,390</td><td>218</td><td>695</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1,890</td><td>228</td><td>945</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>310</td><td>219</td><td>155</td><td>Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>310</td><td>220</td><td>155</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>270</td><td>221</td><td>135</td><td>Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>141</td><td>1,240</td><td>241</td><td>620</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,240</td><td>242</td><td>620</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>440</td><td>243</td><td>220</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>600</td><td>244</td><td>300</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Processing fee under 37 CFR 1.17(q)</td><td></td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td>40.00</td></tr> <tr><td>146</td><td>710</td><td>246</td><td>355</td><td>Filing a submission after final rejection (37 CFR § 1.129(a))</td><td></td></tr> <tr><td>149</td><td>710</td><td>249</td><td>355</td><td>For each additional invention to be examined (37 CFR § 1.129(b))</td><td></td></tr> <tr><td>179</td><td>710</td><td>279</td><td>355</td><td>Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td><td>Request for expedited examination of a design application</td><td></td></tr> <tr> <td colspan="4">Other fee (specify) _____</td> <td></td> <td></td> </tr> <tr> <td colspan="4"><b>SubTOTAL (3)</b></td> <td>(\$)</td> <td>40.00</td> </tr> </tbody> </table>	Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid	105	130	205	65	Surcharge - late filing fee or oath		127	50	227	25	Surcharge - late provisional filing fee or cover sheet		139	130	139	130	Non-English specification		147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination		112	920*	112	920*	Requesting publication of SIR prior to Examiner action		113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action		115	110	215	55	Extension for reply within first month		116	390	216	195	Extension for reply within second month		117	890	217	445	Extension for reply within third month		118	1,390	218	695	Extension for reply within fourth month		128	1,890	228	945	Extension for reply within fifth month		119	310	219	155	Notice of Appeal		120	310	220	155	Filing a brief in support of an appeal		121	270	221	135	Request for oral hearing		138	1,510	138	1,510	Petition to institute a public use proceeding		140	110	240	55	Petition to revive - unavoidable		141	1,240	241	620	Petition to revive - unintentional		142	1,240	242	620	Utility issue fee (or reissue)		143	440	243	220	Design issue fee		144	600	244	300	Plant issue fee		122	130	122	130	Petitions to the Commissioner		123	50	123	50	Processing fee under 37 CFR 1.17(q)		126	180	126	180	Submission of Information Disclosure Stmt		581	40	581	40	Recording each patent assignment per property (times number of properties)	40.00	146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))		149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))		179	710	279	355	Request for Continued Examination (RCE)		169	900	169	900	Request for expedited examination of a design application		Other fee (specify) _____						<b>SubTOTAL (3)</b>				(\$)	40.00
Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																						
105	130	205	65	Surcharge - late filing fee or oath																																																																																																																																																																																							
127	50	227	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																																							
139	130	139	130	Non-English specification																																																																																																																																																																																							
147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination																																																																																																																																																																																							
112	920*	112	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																																							
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																																							
115	110	215	55	Extension for reply within first month																																																																																																																																																																																							
116	390	216	195	Extension for reply within second month																																																																																																																																																																																							
117	890	217	445	Extension for reply within third month																																																																																																																																																																																							
118	1,390	218	695	Extension for reply within fourth month																																																																																																																																																																																							
128	1,890	228	945	Extension for reply within fifth month																																																																																																																																																																																							
119	310	219	155	Notice of Appeal																																																																																																																																																																																							
120	310	220	155	Filing a brief in support of an appeal																																																																																																																																																																																							
121	270	221	135	Request for oral hearing																																																																																																																																																																																							
138	1,510	138	1,510	Petition to institute a public use proceeding																																																																																																																																																																																							
140	110	240	55	Petition to revive - unavoidable																																																																																																																																																																																							
141	1,240	241	620	Petition to revive - unintentional																																																																																																																																																																																							
142	1,240	242	620	Utility issue fee (or reissue)																																																																																																																																																																																							
143	440	243	220	Design issue fee																																																																																																																																																																																							
144	600	244	300	Plant issue fee																																																																																																																																																																																							
122	130	122	130	Petitions to the Commissioner																																																																																																																																																																																							
123	50	123	50	Processing fee under 37 CFR 1.17(q)																																																																																																																																																																																							
126	180	126	180	Submission of Information Disclosure Stmt																																																																																																																																																																																							
581	40	581	40	Recording each patent assignment per property (times number of properties)	40.00																																																																																																																																																																																						
146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))																																																																																																																																																																																							
149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))																																																																																																																																																																																							
179	710	279	355	Request for Continued Examination (RCE)																																																																																																																																																																																							
169	900	169	900	Request for expedited examination of a design application																																																																																																																																																																																							
Other fee (specify) _____																																																																																																																																																																																											
<b>SubTOTAL (3)</b>				(\$)	40.00																																																																																																																																																																																						
<p><b>1. BASIC FILING FEE</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Large Entity Fee Code</th> <th>Large Entity Fee (\$)</th> <th>Small Entity Fee Code</th> <th>Small Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>101</td><td>710</td><td>201</td><td>355</td><td>Utility filing fee</td><td>355.00</td></tr> <tr><td>106</td><td>320</td><td>206</td><td>160</td><td>Design filing fee</td><td></td></tr> <tr><td>107</td><td>490</td><td>207</td><td>245</td><td>Plant filing fee</td><td></td></tr> <tr><td>108</td><td>710</td><td>208</td><td>355</td><td>Reissue filing fee</td><td></td></tr> <tr><td>114</td><td>150</td><td>214</td><td>75</td><td>Provisional filing fee</td><td></td></tr> <tr> <td colspan="5"><b>SUBTOTAL (1)</b></td> <td>(\$)</td> </tr> </tbody> </table> <p><b>2. EXTRA CLAIM FEES</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Total Claims</th> <th>Extra Claims</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>-20**= 0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Independent Claims: 3</td> <td>-3**= 0</td> <td>40</td> <td>0</td> </tr> <tr> <td>Multiple Dependent</td> <td></td> <td></td> <td>0</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Large Entity Fee Code</th> <th>Large Entity Fee (\$)</th> <th>Small Entity Fee Code</th> <th>Small Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>103</td><td>18</td><td>203</td><td>9</td><td>Claims in excess of 20</td><td></td></tr> <tr><td>102</td><td>80</td><td>202</td><td>40</td><td>Independent claims in excess of 3</td><td></td></tr> <tr><td>104</td><td>270</td><td>204</td><td>135</td><td>Multiple dependent claim, if not paid</td><td></td></tr> <tr><td>109</td><td>80</td><td>209</td><td>40</td><td>**Reissue independent claims over original patent</td><td></td></tr> <tr><td>110</td><td>18</td><td>210</td><td>9</td><td>**Reissue claims in excess of 20 and over original patent</td><td></td></tr> <tr> <td colspan="5"><b>SUBTOTAL (2)</b></td> <td>(\$)</td> </tr> </tbody> </table> <p><small>**or number previously paid, if greater; For Reissues, see above</small></p>	Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid	101	710	201	355	Utility filing fee	355.00	106	320	206	160	Design filing fee		107	490	207	245	Plant filing fee		108	710	208	355	Reissue filing fee		114	150	214	75	Provisional filing fee		<b>SUBTOTAL (1)</b>					(\$)	Total Claims	Extra Claims	Fee from below	Fee Paid	16	-20**= 0	9	0	Independent Claims: 3	-3**= 0	40	0	Multiple Dependent			0	Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid	103	18	203	9	Claims in excess of 20		102	80	202	40	Independent claims in excess of 3		104	270	204	135	Multiple dependent claim, if not paid		109	80	209	40	**Reissue independent claims over original patent		110	18	210	9	**Reissue claims in excess of 20 and over original patent		<b>SUBTOTAL (2)</b>					(\$)																																																																																							
Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																						
101	710	201	355	Utility filing fee	355.00																																																																																																																																																																																						
106	320	206	160	Design filing fee																																																																																																																																																																																							
107	490	207	245	Plant filing fee																																																																																																																																																																																							
108	710	208	355	Reissue filing fee																																																																																																																																																																																							
114	150	214	75	Provisional filing fee																																																																																																																																																																																							
<b>SUBTOTAL (1)</b>					(\$)																																																																																																																																																																																						
Total Claims	Extra Claims	Fee from below	Fee Paid																																																																																																																																																																																								
16	-20**= 0	9	0																																																																																																																																																																																								
Independent Claims: 3	-3**= 0	40	0																																																																																																																																																																																								
Multiple Dependent			0																																																																																																																																																																																								
Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																						
103	18	203	9	Claims in excess of 20																																																																																																																																																																																							
102	80	202	40	Independent claims in excess of 3																																																																																																																																																																																							
104	270	204	135	Multiple dependent claim, if not paid																																																																																																																																																																																							
109	80	209	40	**Reissue independent claims over original patent																																																																																																																																																																																							
110	18	210	9	**Reissue claims in excess of 20 and over original patent																																																																																																																																																																																							
<b>SUBTOTAL (2)</b>					(\$)																																																																																																																																																																																						

SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	Scott J. Menghini	Registration No. (Attorney/Agent)	42,880
Signature		Telephone	858-552-1311
		Date	August 21, 2001

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization of PTO-2038.**

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.